



stonefly

representative species

Kingdom: Animalia
Division/Phylum: Arthropoda
Class: Insecta
Order: Plecoptera

Features

Stoneflies undergo incomplete metamorphosis (egg, nymph, adult). The one-half to 1 1/2-inch nymph is tan, brown, gold, or black. It has six legs with two hooks on the tip of each. It breathes through its skin or through gills under its legs. Its body is flattened, which allows it to crawl under rocks. It has two sets of wing pads and two long, hairlike projections from the rear of the abdomen. The adult has two projections as well and two pairs of long, folded wings. The body is elongate and soft. When at rest the wings are held flat over the abdomen. The mouthparts are for chewing.

Natural History

Stonefly nymphs are aquatic. Adults live near cold streams or lake shores. The female deposits eggs on the surface of the water body and they drift to the bottom. The nymph can live only where a high level of oxygen is found. When the amount of oxygen in the water decreases, the stonefly nymph does "pushups" to increase water flow over the gills, therefore increasing the amount of oxygen available and taken

in. After one to two years, it crawls out of the water to molt to the adult stage. Nymphs change into adults throughout the year and adults often are seen flying in winter or crawling on snow or ice. The adult that emerges in summer is nocturnal and generally does not eat. The fall- or winter-emerging adult eats blue-green algae and plant materials. It is a predator or scavenger. There are over 40 species of stoneflies in Iowa.

Habitats

Mississippi River; Missouri River; interior rivers and streams; natural lakes and prairie marshes; constructed lakes, ponds, and reservoirs

Iowa Status

common; native

Iowa Range

statewide

Bibliography

Iowa Department of Natural Resources. 2001.
Biodiversity of Iowa: Aquatic Habitats CD-ROM.